

SOME UNWELCOME ADDITIONS TO THE FLORA OF NEW HAMPSHIRE

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ABSTRACT

During the last decade the discovery of a number of new plant localities have added additional species to the flora of New Hampshire. Most of those have been native plants, and the new sites are valued records for the data base on rare plants. Three of the additions reported here are aggressive weeds of aquatic habitats, a fourth is an introduction of exotic germ plasm in a wetland habitat. They are less than welcome additions to the flora of the state.

Key Words: Wetlands, weeds, *Najas minor*, *Scirpus fluviatilis*, *Potamogeton crispus*, *Myriophyllum spicatum*

***Najas minor* All.**

The Minor Naiad or Eutrophic Water-nymph is one of the more distinctive species of *Najas*, with its conspicuously serrulate leaves that become recurved with age (Haynes, 1979). This European species, first introduced into North America about 60 years ago, has continued to extend its range throughout northeastern United States (Meriläinen, 1968). New England localities are few and were reported by Hellquist and Crow (1980) from western Vermont and western Massachusetts, growing in alkaline waters.

During a study of created wetlands in southeastern New Hampshire in 1992 (Padgett and Crow, in press a and b), a population of *Najas minor* was discovered in Rockingham County. The site was a six year old created wetland, serving as mitigation for a wetland destroyed during the construction of a new hospital in Portsmouth. Since the mitigation plan involved a natural colonization of vegetation largely derived from the seed and propagule bank provided in the transportation of wetland muck from the hospital site and spread as a dressing at the mitigation site, no planting scheme was carried out at the site. While its introduction remains a bit puzzling, seeds could have been introduced by water fowl. *Najas minor* has been reported to invade recently constructed artificial lakes and ponds in Ohio (Wentz and Stuckey, 1971).

SPECIMENS: **New Hampshire.** Rockingham Co.: City of Portsmouth, H.C.A. created wetland, west side of Route 1. 22 July

1992, *D. J. Padgett* 167; 1 September 1992, *D. J. Padgett* 236 (NHA).

***Scirpus fluviatilis* (Torr.) A. Gray**

In another created wetland included in the study cited above, River Bulrush was discovered as a new addition to the flora of New Hampshire. The wetland site was created as mitigation for wetlands impacted by the construction of a mall in Salem. The population was established as part of a planting scheme designed by consultants responsible for the mitigation project. Acquired from a Wisconsin supplier, approximately 6000 tubers of *S. fluviatilis* were planted during the summer of 1990. This planting appears to be successful, with a population forming a very dense, fertile stand.

This new record represents a situation of some concern. While *Scirpus fluviatilis* is actually native to New England, having been reported from Maine, Vermont, Massachusetts and Connecticut, it is listed as a rare plant of "special concern" in Massachusetts (Coddington and Field, 1978; Sorrie, 1987), presently regarded as "threatened" in Connecticut, and is currently being evaluated for rareness for the New England region by the *Flora Conservanda* project, New England Conservation Program. We certainly question the ethics of deliberately introducing plants into a region where native populations are in need of conservation (Padgett and Crow, in press c).

SPECIMENS: **New Hampshire.** Rockingham Co.: Town of Salem, created wetland at southernmost entrance of The Mall at Rockingham Park, Rockingham Park Blvd. 24 August 1992, *D. J. Padgett* 354 (NHA).

***Potamogeton crispus* L.**

Potamogeton crispus (Curly Pondweed), a Eurasian plant, is a widely distributed adventive species which has become a troublesome weed in many parts of the United States (Stuckey, 1979) and is rapidly spreading in bordering Canada (Catling and Dobson, 1985). In New England it occurs primarily in scattered locations throughout western and southern portions of the region and in polluted ponds and streams in eastern Massachusetts (Hellquist and Crow, 1980). The earliest documented occurrence in

New Hampshire is a specimen collected by C. B. Hellquist from the Connecticut River, collected in 1984. That same year specimen fragments from an artificial pond in Hampton, NH, were brought in to the Hodgdon Herbarium for identification, which G. Crow determined as *P. crispus*. This occurrence in southeastern New Hampshire was not unexpected, as the species has been reported from nearby Massachusetts, growing in the Merrimack River, West Newbury (Caldwell and Crow, 1992).

SPECIMENS. New Hampshire. Cheshire Co.: Walpole, west shore of Connecticut River east of backwater ca. 1.5 miles north of Bellows Falls, VT. 4 September 1984, C. B. Hellquist 15446 (NASC, NHA).

Myriophyllum spicatum L.

Eurasian Milfoil is an especially unwelcome addition to the flora of New Hampshire. Crow and Hellquist (1983) reported this noxious weed as locally abundant and aggressive in alkaline waters of western Vermont and Massachusetts, with only one locality in eastern Massachusetts and one in northeastern Connecticut. The first record for New Hampshire is based on a collection submitted by the New Hampshire Water Supply and Pollution Control Commission to the Hodgdon Herbarium for identification; G. E. Crow confirmed its identity as *Myriophyllum spicatum*. The plant was found to be choking the waters of Mountain Lake, Brookfield, an isolated pond whose access is by a poor road requiring 4-wheel drive. Its appearance in this remote locality with soft waters remains a puzzle. A handy field character for recognizing this species, even in vegetative condition, is that the ends of the uppermost feather-like leaves are flat-topped, as if trimmed by a pair of scissors (Crow and Hellquist, 1983, in press).

SPECIMENS: New Hampshire. Strafford Co.: Town of Brookfield, Mountain Lake. 3 September 1992, K. Warren, s.n. (NHA).

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